IN THE CLAIMS

The following claim set replaces all prior versions, and listings, of claims in the application:

1 (currently amended). A microfabricated cell injector comprising an injection wall and projecting from the injection wall a cell injection needle for piercing cells suspended in a fluid, wherein the needle is held within a housing defined by the internal surfaces of the microfabricated cell injector, the housing having an inlet for suspended cells to enter and an outlet for cells to exit via the cell injection needle; and cell propulsion means for impelling cells towards the needle, such that in use cells suspended in a the fluid are impelled towards the injection wall and pierced by the injection needle whereupon material is (1) injected into the cell, (2) extracted from the cell, or (3) injected into the cell and then extracted from the cell the steps being in any order and any number of times.

2-3 (cancelled).

4 (currently amended). A microfabricated cell injector as claimed in claim 3-1 wherein a single inlet for cells to enter the housing is also the outlet for cells to exit the housing.

5 (currently amended). A microfabricated cell injector as claimed in claim 3-1 wherein the microfabricated cell injector has a number of housings each with at least

GARMAN et al. Serial No. 09/763,825 June 5, 2003

one needle wherein suspended cells for injection are divided and each divided stream of suspended cells is fed through one housing.

6 (currently amended). A microfabricated cell injector comprising an internal surface defining a conduit which in use transports for transporting cells suspended in a fluid, the conduit having an inlet and an outlet, the conduit further comprising a cell injection needle for piercing cells, such that, in use cells enter the injector via the inlet, are moved along the conduit and are pierced by the cell injection needle whereupon material is (1) injected into the cell, (2) extracted from the cell, or (3) injected into the cell and then extracted from the cell the steps being in any order and any number of times, and the cells are then moved to the outlet.

7 (currently amended). A microfabricated cell injector as claimed in claim 1 or claim 6 where the needle is a hollow structure and injection or extraction is actuated by a cell sensor at an injection area which determines the presence of a cell on or nearby the needle.

8 (currently amended). A microfabricated cell injector as claimed in claim 1 or claim 6 which additionally comprises a cell capture sensor at an injection position which determines the presence of a pierced cell on the injection needle and actuates injection of material into the cell or extraction of material from the cell.

9 (original). A microfabricated cell injector as claimed in claim 8 wherein the cell

GARMAN et al. Serial No. 09/763,825 June 5, 2003

capture sensor prevents further cells being impelled towards the needle.

10 (previously amended). A microfabricated cell injector as claimed in claim 8 wherein the cell capture sensor actuates the expulsion of the cell from the needle after injection of the material into the cell or extraction of material from the cell.

11 (currently amended). A microfabricated cell injector as claimed in claim 1 or claim 6 wherein the needle is solid and material for injection is present within the fluid suspending the cells.

B5

12 (currently amended). A microfabricated cell injector as claimed in any claim from 1 to 6 claim 1 or claim 6 wherein the needle is a non-cell piercing hollow structure and cell piercing is achieved by the application of a cell disrupting chemical or force being applied through the end of the non-cell piercing needle structure.

13 (currently amended). A microfabricated device containing a plurality of cell injector units as claimed in claim 1 or claim 6 wherein the respective inlets and outlets of the cell injecting units being each connected such that the cells are divided into each injector unit and recombined after injection.

14 (currently amended). A method for the microinjection of cells which method comprises passing a suspension of cells in a fluid through a conduit, the conduit comprising an inlet and an outlet, the cells entering the conduit via the inlet, the conduit

GARMAN et al. Serial No. 09/763,825 June 5, 2003

further comprising a cell injection needle, the cells thereby being pierced by the injection needle and material is: (1) injected into the cell (2) extracted from the cell or (3) injected into the cell and then extracted from the cell the steps being in any order and any number of times; as the cells pass through the conduit, and moving the cells to the outlet.

B5

15 (previously amended). A method for the microinjection of cells which method comprises passing a suspension of cells in a fluid through a device as claimed in claim 1.

16 (cancelled).

17 (cancelled).